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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,860	03/04/2002	Robert P. Carmichael	10547-005/HRH	4309

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BERESKIN AND PARR
40 KING STREET WEST
BOX 401
TORONTO, ON M5H 3Y2
CANADA

EXAMINER

BUMGARNER, MELBA N

ART UNIT	PAPER NUMBER
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3732

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/086,860

Applicant(s)

CARMICHAEL ET AL.

Examiner

Melba Bumgarner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02-4-05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 1 and 10-12 are objected to because of the following informalities: recitation of “said thread” in line 4 lacks sufficient antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 9, it is unclear whether “a thread having at least three revolutions” is in addition to the “said thread” of claim 1. In claim 10, it is unclear which “said thread” is further limited. The term “thread” in claim 1 is used by the claim to mean “threads” of the lead thread portion, intermediate thread portion and distal thread portion; however, it appears to be further defined in claim 9 as thread of the lead thread portion and further defined as threads of the intermediate thread portion and the distal thread portion. It is suggested that if the definition of “thread” is clarified (see paragraph 3), the definition of the terms “crest” and “root” be corrected accordingly as they appear to be used for both a single and multiple number in a claimed thread portion.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Grafelmann (4,863,383). Grafelmann discloses a dental implant 1 comprising a body portion and a head portion, the body portion comprising a tip portion remote from the head portion, a lead thread portion adjacent the tip portion, an intermediate thread portion adjacent the lead thread portion and a distal thread portion adjacent the head portion, the threads of the portions comprise a cutting edge (column 3 line 27), the implant comprises a central bore 11 within the head portion and a thread 12 within the bore, the tip portion comprises at least one cutting edge 8 and the body portion comprising at least one flute 6 having a first end adjacent the at least one cutting edge, the body portion having an axis and the cutting edge of the tip portion commencing at the axis and extending radially outwardly from the axis (figure 1). As to claim 2, the body portion has a general longitudinal axis and comprises an outer surface and the at least one flute extends along the outer surface in a direction substantially parallel to the axis. As to claims 3 and 4, the implant comprises at least two cutting edges and at least two flutes (column 3 line 42). As to claim 5, the flute extends from the tip portion along the lead thread portion and the intermediate thread portion. As to claim 6, the flute has a distal end and the distal end is adjacent a proximal end of the distal thread portion.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grafelmann in view of Day (5,947,735). Grafelmann discloses a dental implant that shows the limitations as described above; however, Grafelmann does not show the flute having a flute surface that is roughened. Day teaches a dental implant comprising the flute having a flute surface and the surface is roughened (column 4 line 25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the implant of Grafelmann to have the roughened surface as in Day in order to aide in osseointegration in view of Day. As to claim 8, the surface of the lead thread portion and the surface of the intermediate thread portion are smooth (column 4 line 22). As to claim 9, the lead thread portion comprises a thread having at least three revolutions.

8. Claims 9-11 are rejected as understood, under 35 U.S.C. 103(a) as being unpatentable over Grafelmann in view of Beaty et al. (5,727,943). Grafelmann discloses a dental implant that shows the limitations as described above; however, Grafelmann does not show the lead thread portion comprising a thread having at least three revolutions of which its crests extend radially outwardly, distally, relative to the general longitudinal axis. Beaty et al. teach a dental implant having the lead thread portion comprising thread of at least three revolutions of which its crests extend radially outwardly, distally, relative to the general longitudinal axis (figures 1,3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the crest line as in Beaty et al. in order to provide friction-reducing structure in view of Beaty et al. As to claim 11, Day and Beaty et al. show a crest line joining the crests of the threads of the intermediate thread portion and the distal thread portion is substantially parallel to the axis.

Allowable Subject Matter

9. Claims 12-14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments with respect to the rejected claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Carchidi et al. (6,398,785) is cited to show the state of the art with respect to a bone implants.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melba Bumgarner whose telephone number is 703-305-0740. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached at (703) 308-2582. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in cursive script, reading "Melba Bumgarner".

Melba Bumgarner
Primary Examiner